

## Guidance for the completion of the Generic Groundwater Protection Plan for Monitoring Well Drillers

Complete the following sections to execute this generic groundwater protection plan:

- General Information

NAME: \_\_\_\_\_  
(Well Owner)

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

COUNTY: \_\_\_\_\_

PHONE #: \_\_\_\_\_

Name of person responsible for implementing this Groundwater Protection Plan:

\_\_\_\_\_

- Schedule of Implementation of Groundwater Protection Practices

Selected Practices

**(For example)**

State that you, the monitoring well driller, will meet the requirements of 401 KAR 6:310 Section 13(2) and that you will also comply with the specific requirements under other federal or state regulatory programs (The Regulatory Authority).

(For example)

1. Siting Consideration

1. State that all monitoring wells constructed in a flood area shall be water tight and shall be in accordance with The Regulatory Authority.

2. Decontamination

1. State that the specified decontamination practices shall be followed:

1. All downhole equipment shall be washed before each well is drilled, with non-phosphate soap and potable water or with a steam jenny or both, and capable of removing all foreign material.

2. Except for road film or dust, the drill rig shall be "cleaned" before arriving at the drill site.

3. Other Drill-site Groundwater Protection Practices

1. If monitoring well drilling occurs at a hazardous waste site then all wash water and all downhole material removed will be drummed and disposed of properly.

2. Specify that pump test or well development activities will not erode the ground surface or cause a pollutant discharge into any drainage feature.

4. Well Design Considerations for Proper Well Installation

1. Well Casing:

1. State that no monitoring well shall be left open during or at the conclusion of well construction activities.

2. Specify that monitoring well casing shall be in accordance with The Regulatory Authority.
3. Specify that monitoring well casing to be used shall be considered for stress, corrosiveness of the water and compatible with suspected contaminants and manufacturer specifications. Also state that the casing, seals and grout shall be installed so as to prevent borehole collapse and mixing of groundwaters.
4. State that the minimum standards for steel and plastic casing found in Tables B and C of 401 KAR 6:310 as well as the standards for schedule 40 and 80 casing meeting NSF Standard 14 (NSF WC) have been reviewed before casing installation.
2. Well intakes/screens:
  1. Specify that well screens are installed in accordance with The Regulatory Authority.
3. Filter Pack Design:
  1. Specify that filter packs are installed in accordance with The Regulatory Authority. State that filter pack installation not falling in the above noted category shall extend from the bottom of the well screen to approximately two (2) to five (5) feet above the top of the well screen. the filter pack grain size shall be such that 85 to 100% of the grains shall be retained in the annular space and will not be factor in water flow.
4. Annular Seal Design:
  1. Specify that the annular space above the sand pack shall be sealed in accordance with The Regulatory Authority. State that annular space sealing not falling in the above noted category shall consist of a hydrated bentonite seal such that it will not be displaced by the tremie pipe when the grout mixture consisting of expanding cement, cement/bentonite or bentonite is pumped.
5. Surface Completions and Protective Measures:
  1. Specify that the above ground (stick-up) completions or the flush to ground (flush mount) completions shall be in accordance with The Regulatory Authority. State the stick-up and flush mount completions not falling in the above noted category should consist of a surface seal of concrete surrounding and sloping away from the well casing to prevent the entry of pollutants through the borehole. This surface seal should be unaffected by frost or freeze heaving. The flush mount shall have bolt down gasketed seals to prevent the entry of pollutants.
  2. Specify that the stick-up and flush mount completions shall be in accordance with The Regulatory Authority. Specify that monitoring well construction not falling under the above noted category will take into consideration the protection of the well casing due to heavy traffic or potential vandalism by utilizing well casing locks, lockable protective steel casing and steel or concrete filled PVC bumper guards.
6. Well Abandonment:
  1. State that monitoring well abandonment shall be in accordance with The Regulatory Authority. Specify that those wells not falling under the category noted above and being the monitoring well owners responsibility for maintenance and abandonment will be abandoned in accordance with the monitoring well owners approved Groundwater Protection Plan (GPP).

Schedule (weekly, monthly, etc.)

**(For example)**

State that you, the certified monitoring well driller, follow the practices stated above at each well site.

- Description of Employee Training Required for Groundwater Protection Plan Implementation

**(For example)**

Describe how you, the certified driller, train your employees to meet the requirements of 401 KAR 6:310 and in accordance with The Regulatory Authority. If you have no employees operating your drill rig or assisting you on the site, state no employees.

- Schedule of Necessary Employee Training

Training Required

**(For example)**

Describe what training your employees need, such as preventing truck or drill oil leaks, anti-freeze leaks, preventing water flowing into borehole, etc. If you have no employees, state no employees.

Schedule (weekly, monthly, etc.)

**(For example)**

Describe if you give your employees on the job training or whether you give lectures covering groundwater protection subjects at your shop. Indicate what trade journal magazines you subscribe to. If you have no employees, state no employees.

- Schedule of Regular Inspections Confirming Groundwater Protection Practices are in Place and Functioning.

Selected Practices

**(For example)**

Describe how you go about inspecting for fuel oil leaks, anti-freeze leaks, etc., and what you do about them. Any absorbent material or plastic used is to be disposed of at a permitted landfill.

Inspection Schedule

**(For example)**

Describe if you inspect the trucks and drill rigs before, during or after each well site. Describe inspection of well site after drilling to confirm that surface water will not enter the well casing or the annular space of the borehole.

(Use extra pages if necessary)

\*Keep all inspection records on file with your groundwater protection plan.

- Certification of Groundwater Protection Plan

To the best of my knowledge, the groundwater protection practices I have selected and will implement according to the schedule given herein are adequate to protect groundwater from pollution associated with the installation, construction, and/or abandonment of this well.

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Driller's Signature

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Date